

Title (en)  
MULTILAYER PIEZOELECTRIC ELEMENT AND EJECTOR USING THIS

Title (de)  
MEHRSCHICHTIGES PIEZOELEKTRISCHES ELEMENT UND AUSWURFVORRICHTUNG DAMIT

Title (fr)  
ÉLÉMENT PIÉZOÉLECTRIQUE MULTICOUCHE ET ÉJECTEUR UTILISANT CE DERNIER

Publication  
**EP 1898476 B1 20141119 (EN)**

Application  
**EP 06766780 A 20060615**

Priority

- JP 2006312046 W 20060615
- JP 2005175719 A 20050615
- JP 2005188986 A 20050628
- JP 2005283682 A 20050929
- JP 2005283684 A 20050929
- JP 2005313865 A 20051028
- JP 2006089697 A 20060329
- JP 2006089698 A 20060329
- JP 2006152288 A 20060531
- JP 2006152289 A 20060531

Abstract (en)  
[origin: EP1898476A1] A multilayer piezoelectric element formed by laying a plurality of piezoelectric layers and metal layers alternately, wherein the plurality of metal layers include a plurality of low-fill metal layers having a fill factor of a metal composing the metal layers lower than that of adjacent, opposite-sides metal layers in the layer direction. In a multilayer piezoelectric element where a plurality of piezoelectric layers and metal layers are laid in layers alternately, the plurality of metal layers include a plurality of thin metal layers having a thickness smaller than that of adjacent, opposite-sides metal layers in the layer direction. In a multilayer piezoelectric element where a plurality of piezoelectric layers and metal layers principally containing an alloy are laid in layers alternately, the plurality of metal layers include a plurality of metal layers having a ratio of one component of the alloy higher than that of adjacent, opposite-sides metal layers in the layer direction.

IPC 8 full level  
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EP3101912A4; EP1998383A4; EP2003706A4; EP2605299A3; US9005383B2; WO2007097460A1; US10322437B2; US8314535B2; US8022598B2; US8274199B2

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**EP 06766780 A 20060615**; CN 200680021047 A 20060615; CN 201210155477 A 20060615; JP 2006312046 W 20060615; US 201213728184 A 20121227; US 201213728212 A 20121227; US 91774706 A 20060615